

CLAIMS

What Is Claimed Is:

- 543
01
1. A multi-layer composite structure, comprising:
an outer layer of acrylic; and
5 an acrylic foam core attached to at least a portion of
said outer layer of acrylic.
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2. The multi-layer composite structure of claim 1 further
comprising an acrylic inner layer attached to at least a portion of
said foam core.
- 10 3. The multi-layer composite structure of claim 1 wherein
said outer layer also includes an ABS material to form an acrylic-
ABS outer layer.
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4. The multi-layer composite structure of claim 1 wherein
said outer layer also includes a polyvinylchloride material to form
15 an acrylic-polyvinylchloride outer layer.
- 543
A2
5. The multi-layer composite structure of claim 1 wherein
said foam core also includes a polyvinylchloride material to form
an acrylic-polyvinylchloride form core.
6. The multi-layer composite structure of claim 4 wherein
20 said foam core also includes a polyvinylchloride material to form
an acrylic-polyvinylchloride form core.
7. The multi-layer composite structure of claim 1 wherein
said inner layer also includes an ABS material to form an acrylic-
ABS inner layer.

8. The multi-layer composite structure of claim 1 wherein said inner layer also includes a polyvinylchloride material to form an acrylic-polyvinylchloride inner layer.

9. The multi-layer composite structure of claim 1 wherein said outer layer is attached to said foam core by an acrylic adhesive.

10. The multi-layer composite structure of claim 2 wherein said inner layer is attached to said foam core by an acrylic adhesive.

11. A multi-layer composite structure, comprising:
an extruded outer layer of acrylic;
an acrylic foam core attached at a first surface to said outer layer by an acrylic glue; and
an inside layer of acrylic attached at to a second surface of said foam core by an acrylic glue.

12. The multi-layer composite structure of claim 11 wherein said outer layer also includes an ABS material to form an acrylic-ABS outer layer.

13. The multi-layer composite structure of claim 11 wherein said outer layer also includes a polyvinylchloride material to form an acrylic-polyvinylchloride outer layer.

14. The multi-layer composite structure of claim 11 wherein said foam core also includes a polyvinylchloride material to form an acrylic-polyvinylchloride form core.

15. The multi-layer composite structure of claim 13 wherein said foam core also includes a polyvinylchloride material to form

SUB
E3

SUB
D2
000250" 06E2E60

SUB
E2

AB
R3

543
R3
C10

an acrylic-polyvinylchloride foam core.

16. A method for forming a multi-layer composite structure, said method comprising the steps of:

- (a) providing a first layer of acrylic;
- 5 (b) providing an acrylic foam core; and
- (c) attaching said acrylic foam core to at least a portion of the first layer of acrylic.

17. The method of claim 16 wherein step (c) comprises the steps of:

10 spraying an acrylic adhesive to at least a portion of a surface of the first layer of acrylic; and

mating said acrylic foam core to said at least a portion of the surface of said first layer of acrylic sprayed with said adhesive.

15 18. The method of claim 17 further comprising the steps of:

- (d) providing a second layer of acrylic; and
- (e) attaching said second layer of acrylic to at least a portion of said foam core.

19. The method of claim 18 wherein step (e) comprises the 20 steps of:

spraying an acrylic adhesive to a surface of the second layer of acrylic; and

mating said second layer of acrylic to at least a portion of said foam core.

20 20. The method of claim 16 wherein step (c) comprises the step of fusing said first layer of acrylic to said acrylic foam

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core.

21. The method of claim 18 wherein step (e) comprises the step of fusing said second layer of acrylic to said acrylic foam core.

5 22. The method of claim 16 further comprising the step of providing one or more slits through said acrylic foam core.

413
8-22
Couture

AD 74
Add
CB 10/21